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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,415	01/04/2002	James G. Whayne	270/271	1554
23639	7590	10/10/2003	EXAMINER	
BINGHAM, MCCUTCHEN LLP THREE EMBARCADERO, SUITE 1800 SAN FRANCISCO, CA 94111-4067			SHAW, SHAWNA JEANNINE	
		ART UNIT	PAPER NUMBER	
		3737		
DATE MAILED: 10/10/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/039,415	WHAYNE ET AL.
	Examiner	Art Unit
	Shawna J. Shaw	3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 22 September 2003.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 66-87 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 66-87 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.  
 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.  
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) The translation of the foreign language provisional application has been received.  
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) Notice of References Cited (PTO-892)                    4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)                    5) Notice of Informal Patent Application (PTO-152)  
 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.                    6) Other: \_\_\_\_\_

## DETAILED ACTION

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 66-87 have been considered but are moot in view of the new ground(s) of rejection, the finality of the previous office action having been withdrawn.

### ***Claim Rejections - 35 USC § 103***

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 66-87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willis et al. of record.

With respect to the present invention, the examiner notes that arrhythmogenic, early depolarization sites, etc. are indicative of abnormal tissue at that site (see specification p. 43 line 28 – p. 44 line 26).

Regarding claims 66, 67, 72, 77, 78 and 83, Willis et al. teach an electrode structure in contact with heart tissue for mapping and ablation/pacing and further displaying a map of the structure while performing at least part of the procedure and annotating and manipulating the map (col. 18 lines 47-61, col. 20 lines 28-40). See also figures 1, 31 and 32. In addition, Willis et al. identifies and marks different catheters and anatomical features in the display (col. 18 lines 47-51, col. 21 lines 38-52). See also col. 20 lines 35-45. Although Willis et al. does not explicitly address identifying whether an electrode is adjacent an abnormal tissue site, Willis does disclose indicating whether the mapped location of the electrode is adjacent an arrhythmogenic site (col. 20 lines 46-55). It would have been obvious at the time the invention was made to a person of ordinary skill in the art to directly indicate whether an electrode is adjacent abnormal tissue (as indicated by an arrhythmogenic site, for example) to provide a more efficient means for obtaining subsequent meaningful pacing measurements.

Regarding claims 68-71 and 79-82, Willis et al. differs from the claimed invention in that annotation of early depolarization, fractionation, high pace index or arrhythmia entrainment is not addressed explicitly. Willis et al. does disclose that in addition to activation time and potential, other mapping data related to e.g., arrhythmogenic sites, may also be shown on the display (col. 20 lines 46-55). At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary

skill in the art to annotate the electrodes with user-defined events such as potential or probability of an arrhythmogenic site because Applicant has not disclosed that annotating the electrodes with a particular type of mapping data provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with annotating potentials or probabilities of an arrhythmogenic site since these also perform the function of indicating regions of abnormal cardiac tissue.

With respect to the present invention, the examiner notes that designators may be equivalently assigned either by entry of coordinates or by pointing and clicking (see specification p. 44 lines 27-35). The examiner further notes that the electrodes may be annotated according to *user-defined* characteristics (see specification p. 44 lines 27-35).

Regarding claims 73-76 and 84-87, Willis et al. teaches determining the location of (e.g., mapping) electrodes either by determining transducer positions and extrapolating the location based on a known catheter model (col. 17 lines 20-42) or by determining the position based on measured signals and activation times (col. 20 lines 19-40) and displaying the electrodes on the graphical display. Willis et al. furthermore annotates specific catheter portions (such as the extrapolated position of the tip, etc.) in response to a user entry via the graphical user interface for guiding a procedure. See col. 21 lines 38-48. Willis et al. however, does not explicitly address annotating the electrodes on the catheter in response to a user entry. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to additionally

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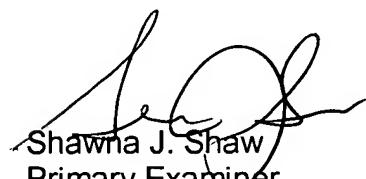
annotate the mapping or ablation electrodes to provide improved guidance and redundancy during a diagnostic and/or therapeutic procedure.

***Conclusion***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawna J. Shaw whose telephone number is (703) 308-2985. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dennis Ruhl can be reached on (703) 308-2262. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.



Shawna J. Shaw  
Primary Examiner  
10/7/03